

Practice: 102 - Comprehensive Nutrient Management Plan - Written**Scenario:** #10 - Non-Dairy Operation Less Than 300 AU with Land Application

Scenario Description: A Comprehensive Nutrient Management Plan (CNMP) will be developed to address resource concerns on a small non-dairy Animal Feeding Operation (AFO) of less than 300 animal units (AU)--primarily swine, poultry, and beef AFOs. The producer may export (material transferred to another owner with written documentation of the transfer) modest amounts of the manure or organic products from the farm. For operations where manure is both applied to land the AFO owner/operator controls and exported offsite, guidance to determine appropriate CNMP CAP scenario selection shall be provided by NRCS at the state level. The producer has an animal production area, farms cropland and applies most nutrients. The CNMP is a conservation plan that addresses resource concerns on the AFO production area and land application areas. Production area components of the plan must include animal confinement facilities, feeding and lounging lots, animal mortality facilities, and manure containment and storage facilities. Land application components of the plan must include all lands under the control of the AFO owner or operator where waste materials are being applied. Planned practices on the production area and land application areas must result in meeting NRCS quality criteria for water quality and soil erosion. Any applicable air emission and negative air quality impacts occurring as a result of planned CNMP activities, or existing on-farm activities must be mitigated in the CNMP if feasible. The CNMP meets the AFO owner/operator's production objectives.

Before Situation: The owner/operator of a small sized non-dairy AFO has not received a written Comprehensive Nutrient Management Plan (CNMP) that addresses all resource concerns present on the facility production area and land waste application areas. Various levels of management and conservation implementation has occurred on the farm. Little documentation of the systems used and practices installed exists. The producer may or may not have a conservation plan or a nutrient management plan. Partial implementation of CNMP-related practices for the AFO has potentially occurred. Resource concerns on the AFO production area and land waste application areas remain to be addressed through the development of a complete CNMP including management and conservation practices for proper manure/wastewater storage and handling, proper disposal of animal mortality, treatment of land application areas to reduce soil erosion to sustainable levels, and application of waste nutrients at an agronomic rate that meets application crop needs and does not exceed site risk analysis assessment condition. Negative air quality impacts and farmstead safety and security issues may remain on the AFO, and recordkeeping methods for crop yields, inspection and monitoring of the existing CNMP-related practices, and manure application and imports/exports may need further improvement.

After Situation: A certified Technical Services Provider (TSP) has delivered, to the AFO owner/operator, a comprehensive nutrient management plan meeting CNMP CAP criteria (GM – Part 405 – Comprehensive Nutrient Management Plans) and to NRCS with the CNMP Case File data that describes management and conservation practice solutions to all identified resource concerns on the small-sized non-dairy AFO production area and land application areas. Collection, transfer, and storage of manure and wastewater systems, mortality management facilities, as well as any rainfall or runoff diversion systems will be inventories-evaluated and planned for adequacy according to applicable NRCS conservation practice standard technical criteria by a Professional Engineer. Management and conservation practices in the CNMP document delivered to the client ensure that, if implemented, the AFO will properly, within applicable NRCS standards and specifications, store, handle, and contain manure and wastewater materials generated by the AFO; dispose of AFO mortality; implement conservation practices to reduce soil erosion on land application areas to sustainable levels; land apply waste material nutrients in a manner than meets NRCS 590 Nutrient Management standard technical criteria. Decisions presented within the CNMP have been made to mitigate, if feasible, negative air quality impacts and improve farmland safety and security. Practices selected in the Record of Decision will provide estimated quantities for conservation practices to be installed in units of measure that align with the practice standards. Accurate recordkeeping documents for crop yields, operation and maintenance of existing and new CNMP-related practices, manure application, AFO manure imports and exports, and other information relevant to the management and compliance of the AFO with state and/or local rules and regulations are included in the CNMP. If the CNMP is not implemented all identified resource concerns will still exist.

Scenario Feature Measure: Number

Scenario Unit: Number

Scenario Typical Size: 1

Total Scenario Cost: \$8,517.26

Scenario Cost/Unit: \$8,517.26

Cost Details

Component Name	Id	Description	Unit	Cost	Qty	Total
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Labor

Cap Labor, conservation scientist	1300	Conservation Activity Plan labor to manage, improve, and protect natural resources to maximize their use without damaging the environment. Interprets resource information and assess resource conditions to provide conservation practice alternatives to producers to make decisions on the treatment of their soil, water, air, plant, animal, and energy resources. May instruct farmers, agricultural production managers, or ranchers in best ways to use crop rotation, contour plowing, or terracing to conserve soil and water; in the number and kind of livestock and forage plants best suited to particular ranges; and in range and farm improvements, such as fencing and reservoirs for stock watering.	Hour	\$78.01	43	\$3,354.59
CAP Labor, professional engineer	1297	Conservation Activity Plan labor to apply knowledge of engineering technology and biological science to agricultural problems concerned with power and machinery, electrification, structures, soil and water conservation, and processing of agricultural products. Cost associated with this component includes overhead and benefits (market price).	Hour	\$93.87	55	\$5,162.67

Practice: 102 - Comprehensive Nutrient Management Plan - Written

Scenario: #11 - Dairy Operation Less Than 300 AU with Land Application

Scenario Description: A Comprehensive Nutrient Management Plan (CNMP) and CNMP Case File will be developed to address resource concerns on a small Dairy Animal Feeding Operation (AFO) of less than 300 animal units (AU). The producer may export (material transferred to another owner with written documentation of the transfer) modest amounts of the manure or organic products from the farm. For operations where manure is both applied to land the AFO owner/operator controls and exported offsite, guidance to determine appropriate CNMP CAP scenario selection shall be provided by NRCS at the state level. The producer has an animal production area, farms cropland and applies most nutrients. The CNMP is a conservation plan that addresses resource concerns on the AFO production area and land application areas. Production area components of the plan must include animal confinement facilities, feeding and lounging lots, animal mortality facilities, and manure containment and storage facilities. Land application components of the plan must include all lands under the control of the AFO owner or operator where waste materials are being applied. Planned practices on the production area and land application areas must result in meeting NRCS quality criteria for water quality and soil erosion. Any applicable air emission and negative air quality impacts occurring as a result of planned CNMP activities, or existing on-farm activities must be mitigated in the CNMP if feasible. The CNMP meets the AFO owner/operator's production objectives.

Before Situation: The owner/operator of a small sized dairy AFO has not received a written Comprehensive Nutrient Management Plan (CNMP) that addresses all resource concerns present on the facility production area and land waste application areas. Various levels of management and conservation implementation has occurred on the farm. Little documentation of the systems used and practices installed exists. The producer may or may not have a conservation plan or a nutrient management plan. Partial implementation of CNMP-related practices for the AFO has potentially occurred. Resource concerns on the AFO production area and land waste application areas remain to be addressed through the development of a complete CNMP including management and conservation practices for proper manure/wastewater storage and handling, proper disposal of animal mortality, treatment of land application areas to reduce soil erosion to sustainable levels, and application of waste nutrients at an agronomic rate that meets application crop needs and does not exceed site risk analysis assessment condition. Negative air quality impacts and farmstead safety and security issues may remain on the AFO, and recordkeeping methods for crop yields, inspection and monitoring of the existing CNMP-related practices, and manure application and imports/exports may need further improvement.

After Situation: A certified Technical Services Provider (TSP) has delivered, to the AFO owner/operator, a comprehensive nutrient management plan meeting CNMP CAP criteria (GM – Part 405 – Comprehensive Nutrient Management Plans) and to NRCS the CNMP with Case File data that describes management and conservation practice solutions to all identified resource concerns on the small-sized dairy AFO production area and land application areas. Collection, transfer, and storage of manure and wastewater systems, mortality management facilities, as well as any rainfall or runoff diversion systems will be inventories-evaluated and planned for adequacy according to applicable NRCS conservation practice standard technical criteria by a Professional Engineer. Management and conservation practices in the CNMP document delivered to the client ensure that, if implemented, the AFO will properly, within applicable NRCS standards and specifications, store, handle, and contain manure and wastewater materials generated by the AFO; dispose of AFO mortality; implement conservation practices to reduce soil erosion on land application areas to sustainable levels; land apply waste material nutrients in a manner than meets NRCS 590 Nutrient Management standard technical criteria. Decisions presented within the CNMP have been made to mitigate, if feasible, negative air quality impacts and improve farmland safety and security. Practices selected in the Record of Decision will provide estimated quantities for conservation practices to be installed in units of measure that align with the practice standards. Accurate recordkeeping documents for crop yields, operation and maintenance of existing and new CNMP-related practices, manure application, AFO manure imports and exports, and other information relevant to the management and compliance of the AFO with state and/or local rules and regulations are included in the CNMP. If the CNMP is not implemented all identified resource concerns will still exist.

Scenario Feature Measure: Number

Scenario Unit: Number

Scenario Typical Size: 1

Total Scenario Cost: \$10,628.63

Scenario Cost/Unit: \$10,628.63

Cost Details

Component Name	Id	Description	Unit	Cost	Qty	Total
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Labor

Cap Labor, conservation scientist	1300	Conservation Activity Plan labor to manage, improve, and protect natural resources to maximize their use without damaging the environment. Interprets resource information and assess resource conditions to provide conservation practice alternatives to producers to make decisions on the treatment of their soil, water, air, plant, animal, and energy resources. May instruct farmers, agricultural production managers, or ranchers in best ways to use crop rotation, contour plowing, or terracing to conserve soil and water; in the number and kind of livestock and forage plants best suited to particular ranges; and in range and farm improvements, such as fencing and reservoirs for stock watering.	Hour	\$78.01	46	\$3,588.63
CAP Labor, professional engineer	1297	Conservation Activity Plan labor to apply knowledge of engineering technology and biological science to agricultural problems concerned with power and machinery, electrification, structures, soil and water conservation, and processing of agricultural products. Cost associated with this component includes overhead and benefits (market price).	Hour	\$93.87	75	\$7,040.00

Practice: 102 - Comprehensive Nutrient Management Plan - Written**Scenario:** #12 - Non-Dairy Operation Greater Than or Equal to 300 AU and Less Than 700 AU with Land Application

Scenario Description: A Comprehensive Nutrient Management Plan (CNMP) will be developed to address resource concerns on a medium non-dairy Animal Feeding Operation (AFO) of greater than or equal to 300 and less than 700 animal units (AU).--primarily swine, poultry, and beef AFOs. The producer may export (material transferred to another owner with written documentation of the transfer) modest amounts of the manure or organic products from the farm. For operations where manure is both applied to land the AFO owner/operator controls and exported offsite, guidance to determine appropriate CNMP CAP scenario selection shall be provided by NRCS at the state level. The producer has an animal production area, farms cropland and applies most nutrients. The CNMP is a conservation plan that addresses resource concerns on the AFO production area and land application areas. Production area components of the plan must include animal confinement facilities, feeding and lounging lots, animal mortality facilities, and manure containment and storage facilities. Land application components of the plan must include all lands under the control of the AFO owner or operator where waste materials are being applied. Planned practices on the production area and land application areas must result in meeting NRCS quality criteria for water quality and soil erosion. Any applicable air emission and negative air quality impacts occurring as a result of planned CNMP activities, or existing on-farm activities must be mitigated in the CNMP if feasible. The CNMP meets the AFO owner/operator's production objectives.

Before Situation: The owner/operator of a medium sized non-dairy AFO has not received a written Comprehensive Nutrient Management Plan (CNMP) that addresses all resource concerns present on the facility production area and land waste application areas. Various levels of management and conservation implementation has occurred on the farm. Little documentation of the systems used and practices installed exists. The producer may or may not have a conservation plan or a nutrient management plan. Partial implementation of CNMP-related practices for the AFO has potentially occurred. Resource concerns on the AFO production area and land waste application areas remain to be addressed through the development of a complete CNMP including management and conservation practices for proper manure/wastewater storage and handling, proper disposal of animal mortality, treatment of land application areas to reduce soil erosion to sustainable levels, and application of waste nutrients at an agronomic rate that meets application crop needs and does not exceed site risk analysis assessment condition. Negative air quality impacts and farmstead safety and security issues may remain on the AFO, and recordkeeping methods for crop yields, inspection and monitoring of the existing CNMP-related practices, and manure application and imports/exports may need further improvement.

After Situation: A certified Technical Services Provider (TSP) has delivered, to the AFO owner/operator, a comprehensive nutrient management plan meeting CNMP CAP criteria (GM – Part 405 – Comprehensive Nutrient Management Plans) and to NRCS with the CNMP Case File data that describes management and conservation practice solutions to all identified resource concerns on the non-dairy AFO production area and land application areas. Collection, transfer, and storage of manure and wastewater systems, mortality management facilities, as well as any rainfall or runoff diversion systems will be inventories-evaluated and planned for adequacy according to applicable NRCS conservation practice standard technical criteria by a Professional Engineer. Management and conservation practices in the CNMP document delivered to the client ensure that, if implemented, the AFO will properly, within applicable NRCS standards and specifications, store, handle, and contain manure and wastewater materials generated by the AFO; dispose of AFO mortality; implement conservation practices to reduce soil erosion on land application areas to sustainable levels; land apply waste material nutrients in a manner that meets NRCS 590 Nutrient Management standard technical criteria. Decisions presented within the CNMP have been made to mitigate, if feasible, negative air quality impacts and improve farmland safety and security. Practices selected in the Record of Decision will provide estimated quantities for conservation practices to be installed in units of measure that align with the practice standards. Accurate recordkeeping documents for crop yields, operation and maintenance of existing and new CNMP-related practices, manure application, AFO manure imports and exports, and other information relevant to the management and compliance of the AFO with state and/or local rules and regulations are included in the CNMP. If the CNMP is not implemented all identified resource concerns will still exist.

Scenario Feature Measure: Number**Scenario Unit:** Number**Scenario Typical Size:** 1**Total Scenario Cost:** \$10,971.14**Scenario Cost/Unit:** \$10,971.14**Cost Details**

Component Name	Id	Description	Unit	Cost	Qty	Total
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Labor

Cap Labor, conservation scientist	1300	Conservation Activity Plan labor to manage, improve, and protect natural resources to maximize their use without damaging the environment. Interprets resource information and assess resource conditions to provide conservation practice alternatives to producers to make decisions on the treatment of their soil, water, air, plant, animal, and energy resources. May instruct farmers, agricultural production managers, or ranchers in best ways to use crop rotation, contour plowing, or terracing to conserve soil and water; in the number and kind of livestock and forage plants best suited to particular ranges; and in range and farm improvements, such as fencing and reservoirs for stock watering.	Hour	\$78.01	54	\$4,212.74
CAP Labor, professional engineer	1297	Conservation Activity Plan labor to apply knowledge of engineering technology and biological science to agricultural problems concerned with power and machinery, electrification, structures, soil and water conservation, and processing of agricultural products. Cost associated with this component includes overhead and benefits (market price).	Hour	\$93.87	72	\$6,758.40

Practice: 102 - Comprehensive Nutrient Management Plan - Written**Scenario:** #13 - Dairy Operation Greater Than or Equal to 300 AU and Less Than 700 AU with Land Application

Scenario Description: A Comprehensive Nutrient Management Plan (CNMP) will be developed to address resource concerns on a medium Dairy Animal Feeding Operation (AFO) of greater than or equal to 300 and less than 700 animal units (AU). The producer may export (material transferred to another owner with written documentation of the transfer) modest amounts of the manure or organic products from the farm. For operations where manure is both applied to land the AFO owner/operator controls and exported offsite, guidance to determine appropriate CNMP CAP scenario selection shall be provided by NRCS at the state level. The producer has an animal production area, farms cropland and applies most nutrients. The CNMP is a conservation plan that addresses resource concerns on the AFO production area and land application areas. Production area components of the plan must include animal confinement facilities, feeding and lounging lots, animal mortality facilities, and manure containment and storage facilities. Land application components of the plan must include all lands under the control of the AFO owner or operator where waste materials are being applied. Planned practices on the production area and land application areas must result in meeting NRCS quality criteria for water quality and soil erosion. Any applicable air emission and negative air quality impacts occurring as a result of planned CNMP activities, or existing on-farm activities must be mitigated in the CNMP if feasible. The CNMP meets the AFO owner/operator's production objectives.

Before Situation: The owner/operator of a medium sized Dairy AFO has not received a written Comprehensive Nutrient Management Plan (CNMP) that addresses all resource concerns present on the facility production area and land waste application areas. Various levels of management and conservation implementation has occurred on the farm. Little documentation of the systems used and practices installed exists. The producer may or may not have a conservation plan or a nutrient management plan. Partial implementation of CNMP-related practices for the AFO has potentially occurred. Resource concerns on the AFO production area and land waste application areas remain to be addressed through the development of a complete CNMP including management and conservation practices for proper manure/wastewater storage and handling, proper disposal of animal mortality, treatment of land application areas to reduce soil erosion to sustainable levels, and application of waste nutrients at an agronomic rate that meets application crop needs and does not exceed site risk analysis assessment condition. Negative air quality impacts and farmstead safety and security issues may remain on the AFO, and recordkeeping methods for crop yields, inspection and monitoring of the existing CNMP-related practices, and manure application and imports/exports may need further improvement.

After Situation: A certified Technical Services Provider (TSP) has delivered, to the AFO owner/operator, a comprehensive nutrient management plan meeting CNMP CAP criteria (GM – Part 405 – Comprehensive Nutrient Management Plans) and to NRCS the CNMP with Case File data that describes management and conservation practice solutions to all identified resource concerns on the dairy AFO production area and land application areas. Collection, transfer, and storage of manure and wastewater systems, mortality management facilities, as well as any rainfall or runoff diversion systems will be inventories-evaluated and planned for adequacy according to applicable NRCS conservation practice standard technical criteria by a Professional Engineer. Management and conservation practices in the CNMP document delivered to the client ensure that, if implemented, the AFO will properly, within applicable NRCS standards and specifications, store, handle, and contain manure and wastewater materials generated by the AFO; dispose of AFO mortality; implement conservation practices to reduce soil erosion on land application areas to sustainable levels; land apply waste material nutrients in a manner than meets NRCS 590 Nutrient Management standard technical criteria. Decisions presented within the CNMP have been made to mitigate, if feasible, negative air quality impacts and improve farmland safety and security. Practices selected in the Record of Decision will provide estimated quantities for conservation practices to be installed in units of measure that align with the practice standards. Accurate recordkeeping documents for crop yields, operation and maintenance of existing and new CNMP-related practices, manure application, AFO manure imports and exports, and other information relevant to the management and compliance of the AFO with state and/or local rules and regulations are included in the CNMP. If the CNMP is not implemented all identified resource concerns will still exist.

Scenario Feature Measure: Number**Scenario Unit:** Number**Scenario Typical Size:** 1**Total Scenario Cost:** \$12,143.85**Scenario Cost/Unit:** \$12,143.85**Cost Details**

Component Name	Id	Description	Unit	Cost	Qty	Total
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Labor

Cap Labor, conservation scientist	1300	Conservation Activity Plan labor to manage, improve, and protect natural resources to maximize their use without damaging the environment. Interprets resource information and assess resource conditions to provide conservation practice alternatives to producers to make decisions on the treatment of their soil, water, air, plant, animal, and energy resources. May instruct farmers, agricultural production managers, or ranchers in best ways to use crop rotation, contour plowing, or terracing to conserve soil and water; in the number and kind of livestock and forage plants best suited to particular ranges; and in range and farm improvements, such as fencing and reservoirs for stock watering.	Hour	\$78.01	57	\$4,446.78
CAP Labor, professional engineer	1297	Conservation Activity Plan labor to apply knowledge of engineering technology and biological science to agricultural problems concerned with power and machinery, electrification, structures, soil and water conservation, and processing of agricultural products. Cost associated with this component includes overhead and benefits (market price).	Hour	\$93.87	82	\$7,697.07

Practice: 102 - Comprehensive Nutrient Management Plan - Written**Scenario:** #14 - Non-Dairy Operation Greater Than or Equal to 700 AU with Land Application

Scenario Description: A Comprehensive Nutrient Management Plan (CNMP) will be developed to address resource concerns on a large non-dairy Animal Feeding Operation ((AFO) of greater than or equal to 700 animal units (AU)--primarily swine, poultry, and beef AFOs. The producer may export (material transferred to another owner with written documentation of the transfer) modest amounts of the manure or organic products from the farm. For operations where manure is both applied to land the AFO owner/operator controls and exported offsite, guidance to determine appropriate CNMP CAP scenario selection shall be provided by NRCS at the state level. The producer has an animal production area, farms cropland and applies most nutrients. The CNMP is a conservation plan that addresses resource concerns on the AFO production area and land application areas. Production area components of the plan must include animal confinement facilities, feeding and lounging lots, animal mortality facilities, and manure containment and storage facilities. Land application components of the plan must include all lands under the control of the AFO owner or operator where waste materials are being applied. Planned practices on the production area and land application areas must result in meeting NRCS quality criteria for water quality and soil erosion. Any applicable air emission and negative air quality impacts occurring as a result of planned CNMP activities, or existing on-farm activities must be mitigated in the CNMP if feasible. The CNMP meets the AFO owner/operator's production objectives.

Before Situation: The owner/operator of a large sized non-dairy AFO has not received a written Comprehensive Nutrient Management Plan (CNMP) that addresses all resource concerns present on the facility production area and land waste application areas. Various levels of management and conservation implementation has occurred on the farm. Little documentation of the systems used and practices installed exists. The producer may or may not have a conservation plan or a nutrient management plan. Partial implementation of CNMP-related practices for the AFO has potentially occurred. Resource concerns on the AFO production area and land waste application areas remain to be addressed through the development of a complete CNMP including management and conservation practices for proper manure/wastewater storage and handling, proper disposal of animal mortality, treatment of land application areas to reduce soil erosion to sustainable levels, and application of waste nutrients at an agronomic rate that meets application crop needs and does not exceed site risk analysis assessment condition. Negative air quality impacts and farmstead safety and security issues may remain on the AFO, and recordkeeping methods for crop yields, inspection and monitoring of the existing CNMP-related practices, and manure application and imports/exports may need further improvement.

After Situation: A certified Technical Services Provider (TSP) has delivered, to the AFO owner/operator, a comprehensive nutrient management plan meeting CNMP CAP criteria (GM – Part 405 – Comprehensive Nutrient Management Plans) and to NRCS with the CNMP Case File data that describes management and conservation practice solutions to all identified resource concerns on the non-dairy AFO production area and land application areas. Collection, transfer, and storage of manure and wastewater systems, mortality management facilities, as well as any rainfall or runoff diversion systems will be inventories-evaluated and planned for adequacy according to applicable NRCS conservation practice standard technical criteria by a Professional Engineer. Management and conservation practices in the CNMP document delivered to the client ensure that, if implemented, the AFO will properly, within applicable NRCS standards and specifications, store, handle, and contain manure and wastewater materials generated by the AFO; dispose of AFO mortality; implement conservation practices to reduce soil erosion on land application areas to sustainable levels; land apply waste material nutrients in a manner than meets NRCS 590 Nutrient Management standard technical criteria. Decisions presented within the CNMP have been made to mitigate, if feasible, negative air quality impacts and improve farmland safety and security. Practices selected in the Record of Decision will provide estimated quantities for conservation practices to be installed in units of measure that align with the practice standards. Accurate recordkeeping documents for crop yields, operation and maintenance of existing and new CNMP-related practices, manure application, AFO manure imports and exports, and other information relevant to the management and compliance of the AFO with state and/or local rules and regulations are included in the CNMP. If the CNMP is not implemented all identified resource concerns will still exist.

Scenario Feature Measure: Number**Scenario Unit:** Number**Scenario Typical Size:** 1**Total Scenario Cost:** \$13,253.15**Scenario Cost/Unit:** \$13,253.15**Cost Details**

Component Name	Id	Description	Unit	Cost	Qty	Total
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Labor

Cap Labor, conservation scientist	1300	Conservation Activity Plan labor to manage, improve, and protect natural resources to maximize their use without damaging the environment. Interprets resource information and assess resource conditions to provide conservation practice alternatives to producers to make decisions on the treatment of their soil, water, air, plant, animal, and energy resources. May instruct farmers, agricultural production managers, or ranchers in best ways to use crop rotation, contour plowing, or terracing to conserve soil and water; in the number and kind of livestock and forage plants best suited to particular ranges; and in range and farm improvements, such as fencing and reservoirs for stock watering.	Hour	\$78.01	64	\$4,992.88
CAP Labor, professional engineer	1297	Conservation Activity Plan labor to apply knowledge of engineering technology and biological science to agricultural problems concerned with power and machinery, electrification, structures, soil and water conservation, and processing of agricultural products. Cost associated with this component includes overhead and benefits (market price).	Hour	\$93.87	88	\$8,260.27

Practice: 102 - Comprehensive Nutrient Management Plan - Written**Scenario:** #15 - Dairy Operation Greater Than or Equal to 700 AU with Land Application

Scenario Description: A Comprehensive Nutrient Management Plan (CNMP) will be developed to address resource concerns on a large Dairy Animal Feeding Operation (AFO) of greater than or equal to 700 animal units (AU). The producer may export (material transferred to another owner with written documentation of the transfer) modest amounts of the manure or organic products from the farm. For operations where manure is both applied to land the AFO owner/operator controls and exported offsite, guidance to determine appropriate CNMP CAP scenario selection shall be provided by NRCS at the state level. The producer has an animal production area, farms cropland and applies most nutrients. The CNMP is a conservation plan that addresses resource concerns on the AFO production area and land application areas. Production area components of the plan must include animal confinement facilities, feeding and lounging lots, animal mortality facilities, and manure containment and storage facilities. Land application components of the plan must include all lands under the control of the AFO owner or operator where waste materials are being applied. Planned practices on the production area and land application areas must result in meeting NRCS quality criteria for water quality and soil erosion. Any applicable air emission and negative air quality impacts occurring as a result of planned CNMP activities, or existing on-farm activities must be mitigated in the CNMP if feasible. The CNMP meets the AFO owner/operator's production objectives.

Before Situation: The owner/operator of a large sized Dairy AFO has not received a written Comprehensive Nutrient Management Plan (CNMP) that addresses all resource concerns present on the facility production area and land waste application areas. Various levels of management and conservation implementation has occurred on the farm. Little documentation of the systems used and practices installed exists. The producer may or may not have a conservation plan or a nutrient management plan. Partial implementation of CNMP-related practices for the AFO has potentially occurred. Resource concerns on the AFO production area and land waste application areas remain to be addressed through the development of a complete CNMP including management and conservation practices for proper manure/wastewater storage and handling, proper disposal of animal mortality, treatment of land application areas to reduce soil erosion to sustainable levels, and application of waste nutrients at an agronomic rate that meets application crop needs and does not exceed site risk analysis assessment condition. Negative air quality impacts and farmstead safety and security issues may remain on the AFO, and recordkeeping methods for crop yields, inspection and monitoring of the existing CNMP-related practices, and manure application and imports/exports may need further improvement.

After Situation: A certified Technical Services Provider (TSP) has delivered, to the AFO owner/operator, a comprehensive nutrient management plan meeting CNMP CAP criteria (GM – Part 405 – Comprehensive Nutrient Management Plans) and to NRCS the CNMP with Case File data that describes management and conservation practice solutions to all identified resource concerns on the dairy AFO production area and land application areas. Collection, transfer, and storage of manure and wastewater systems, mortality management facilities, as well as any rainfall or runoff diversion systems will be inventories-evaluated and planned for adequacy according to applicable NRCS conservation practice standard technical criteria by a Professional Engineer. Management and conservation practices in the CNMP document delivered to the client ensure that, if implemented, the AFO will properly, within applicable NRCS standards and specifications, store, handle, and contain manure and wastewater materials generated by the AFO; dispose of AFO mortality; implement conservation practices to reduce soil erosion on land application areas to sustainable levels; land apply waste material nutrients in a manner that meets NRCS 590 Nutrient Management standard technical criteria. Decisions presented within the CNMP have been made to mitigate, if feasible, negative air quality impacts and improve farmland safety and security. Practices selected in the Record of Decision will provide estimated quantities for conservation practices to be installed in units of measure that align with the practice standards. Accurate recordkeeping documents for crop yields, operation and maintenance of existing and new CNMP-related practices, manure application, AFO manure imports and exports, and other information relevant to the management and compliance of the AFO with state and/or local rules and regulations are included in the CNMP. If the CNMP is not implemented all identified resource concerns will still exist.

Scenario Feature Measure: Number**Scenario Unit:** Number**Scenario Typical Size:** 1**Total Scenario Cost:** \$13,503.04**Scenario Cost/Unit:** \$13,503.04**Cost Details**

Component Name	Id	Description	Unit	Cost	Qty	Total
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Labor

Cap Labor, conservation scientist	1300	Conservation Activity Plan labor to manage, improve, and protect natural resources to maximize their use without damaging the environment. Interprets resource information and assess resource conditions to provide conservation practice alternatives to producers to make decisions on the treatment of their soil, water, air, plant, animal, and energy resources. May instruct farmers, agricultural production managers, or ranchers in best ways to use crop rotation, contour plowing, or terracing to conserve soil and water; in the number and kind of livestock and forage plants best suited to particular ranges; and in range and farm improvements, such as fencing and reservoirs for stock watering.	Hour	\$78.01	66	\$5,148.91
CAP Labor, professional engineer	1297	Conservation Activity Plan labor to apply knowledge of engineering technology and biological science to agricultural problems concerned with power and machinery, electrification, structures, soil and water conservation, and processing of agricultural products. Cost associated with this component includes overhead and benefits (market price).	Hour	\$93.87	89	\$8,354.13

Practice: 102 - Comprehensive Nutrient Management Plan - Written**Scenario:** #16 - Livestock Operation Less Than 300 AU without Land Application

Scenario Description: A Comprehensive Nutrient Management Plan (CNMP) will be developed to address resource concerns on a small Animal Feeding Operation (AFO) of less than 300 animal units (AU). The producer exports (material transferred to another owner with written documentation of the transfer) nearly all of the manure or organic products from the farm. For operations where manure is both applied to land the AFO owner/operator controls and exported offsite, guidance to determine appropriate CNMP CAP scenario selection shall be provided by NRCS at the state level. The CNMP is a conservation plan that addresses resource concerns on the AFO production area and land application areas owned or controlled by the AFO owner/operator. In this scenario, the primary focus will be addressing resource concerns present on the production area, including manure/wastewater handling and storage, and documentation of manure generation by the AFO, and its export. Production area components of the plan must include animal confinement facilities, feeding and lounging areas, animal mortality facilities, and manure containment and storage facilities. Planned practices on the production area must result in meeting NRCS quality criteria for water quality and soil erosion. Any applicable air emission and negative air quality impacts occurring as a result of planned CNMP activities, or existing on-farm activities must be mitigated in the CNMP if feasible. The CNMP meets the AFO owner's/operator's production objectives.

Before Situation: The owner/operator of a small AFO has not received a written comprehensive nutrient management plan (CNMP) that addresses all resource concerns present on the facility production areas and any applicable land application areas. Partial implementation of CNMP- related practices for the AFO has potentially occurred. Various levels of management and conservation implementation has occurred on the farm. Little documentation of the systems used and practices installed exists. The producer may or may not have a conservation plan or a nutrient management plan. Resource concerns on the AFO production area remain to be addressed through the development of a complete CNMP including management and conservation practices for proper manure/wastewater storage and handling, proper disposal of animal mortality, erosion and runoff issues from feeding and lounging areas, and recordkeeping documentation of manure generation and exports. Negative air quality impacts and farmstead safety and security issues may remain on the AFO, and recordkeeping methods for inspection and monitoring of the existing CNMP-related practices, manure imports/exports may need further improvement.

After Situation: A certified Technical Services Provider (TSP) has delivered, to the AFO owner/operator, a comprehensive conservation plan meeting CNMP CAP criteria (GM – Part 405 – Comprehensive Nutrient Management Plans) and to NRCS a the CNMP Case File that describes management and conservation practice solutions to all identified resource concerns on the small sized AFO production area and any applicable land application areas. Collection, transfer, and storage of manure and wastewater systems, mortality management facilities, as well as any rainfall or runoff diversion systems will be inventories/evaluated and planned for adequacy according to applicable NRCS conservation practice standard technical criteria by a Professional Engineer. Conservation practices in the CNMP document delivered to the client ensure that, if implemented, the AFO will properly, within applicable NRCS standards and specifications, store, handle, and contain manure and wastewater materials generated by the AFO; dispose of AFO mortality; minimize erosion and runoff from feeding and lounging areas, keep accurate AFO animal inventory information, and document AFO manure generation and exports. Decisions presented within the CNMP have been made to mitigate, if feasible, negative air quality impacts and improve farmland safety and security. Decisions selected in the Record of Decision will provide estimated quantities for conservation practices to be installed in units of measure that align with those in the conservation practice. Accurate recordkeeping documents for operation and maintenance of existing and new CNMP-related practices, AFO manure imports and exports, and other information relevant to the management and compliance of the AFO with state and/or local rules and regulations are included in the CNMP. If the CNMP is not implemented all identified resource concerns will still exist..

Scenario Feature Measure: Number**Scenario Unit:** Number**Scenario Typical Size:** 1**Total Scenario Cost:** \$7,677.46**Scenario Cost/Unit:** \$7,677.46**Cost Details**

Component Name	Id	Description	Unit	Cost	Qty	Total
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Labor

Cap Labor, conservation scientist	1300	Conservation Activity Plan labor to manage, improve, and protect natural resources to maximize their use without damaging the environment. Interprets resource information and assess resource conditions to provide conservation practice alternatives to producers to make decisions on the treatment of their soil, water, air, plant, animal, and energy resources. May instruct farmers, agricultural production managers, or ranchers in best ways to use crop rotation, contour plowing, or terracing to conserve soil and water; in the number and kind of livestock and forage plants best suited to particular ranges; and in range and farm improvements, such as fencing and reservoirs for stock watering.	Hour	\$78.01	19	\$1,482.26
CAP Labor, professional engineer	1297	Conservation Activity Plan labor to apply knowledge of engineering technology and biological science to agricultural problems concerned with power and machinery, electrification, structures, soil and water conservation, and processing of agricultural products. Cost associated with this component includes overhead and benefits (market price).	Hour	\$93.87	66	\$6,195.20

Practice: 102 - Comprehensive Nutrient Management Plan - Written**Scenario:** #17 - Livestock Operation Greater Than 300 AU without Land Application

Scenario Description: A Comprehensive Nutrient Management Plan (CNMP) will be developed to address resource concerns on a medium-large Animal Feeding Operation (AFO) of greater than or equal to 300 animal units (AU). The producer exports (material transferred to another owner with written documentation of the transfer) nearly all of the manure or organic products from the farm. For operations where manure is both applied to land the AFO owner/operator controls and exported offsite, guidance to determine appropriate CNMP CAP scenario selection shall be provided by NRCS at the state level. The CNMP is a conservation plan that addresses resource concerns on the AFO production area and land application areas owned or controlled by the AFO owner/operator. In this scenario, the primary focus will be addressing resource concerns present on the production area, including manure/wastewater handling and storage, and documentation of manure generation by the AFO, and its export. Production area components of the plan must include animal confinement facilities, feeding and lounging lots, animal mortality facilities, and manure containment and storage facilities. Planned practices on the production area must result in meeting NRCS quality criteria for water quality and soil erosion. Any applicable air emission and negative air quality impacts occurring as a result of planned CNMP activities, or existing on-farm activities must be mitigated in the CNMP if feasible. The CNMP meets the AFO owner's/operator's production objectives.

Before Situation: The owner/operator of a medium-large sized AFO has not received a written comprehensive nutrient management plan (CNMP) that addresses all resource concerns present on the facility production areas and any applicable land application areas. Partial implementation of CNMP-related practices for the AFO has potentially occurred. Various levels of management and conservation implementation has occurred on the farm. Little documentation of the systems used and practices installed exists. The producer may or may not have a conservation plan or a nutrient management plan. Resource concerns on the AFO production area remain to be addressed through the development of a complete CNMP including management and conservation practices for proper manure/wastewater storage and handling, proper disposal of animal mortality, erosion and runoff issues from feeding and lounging areas, and recordkeeping documentation of manure generation and exports. Negative air quality impacts and farmstead safety and security issues may remain on the AFO, and recordkeeping methods for inspection and monitoring of the existing CNMP-related practices, manure imports/exports may need further improvement.

After Situation: A certified Technical Services Provider (TSP) has delivered, to the AFO owner/operator, a comprehensive conservation plan meeting CNMP CAP criteria (GM – Part 405 – Comprehensive Nutrient Management Plans) and to NRCS a the CNMP Case File that describes management and conservation practice solutions to all identified resource concerns on the small sized AFO production area and any applicable land application areas. Collection, transfer, and storage of manure and wastewater systems, mortality management facilities, as well as any rainfall or runoff diversion systems will be inventories/evaluated and planned for adequacy according to applicable NRCS conservation practice standard technical criteria by a Professional Engineer. Conservation practices in the CNMP document delivered to the client ensure that, if implemented, the AFO will properly, within applicable NRCS standards and specifications, store, handle, and contain manure and wastewater materials generated by the AFO; dispose of AFO mortality; minimize erosion and runoff from feeding and lounging areas, keep accurate AFO animal inventory information, and document AFO manure generation and exports. Decisions presented within the CNMP have been made to mitigate, if feasible, negative air quality impacts and improve farmland safety and security. Decisions selected in the Record of Decision will provide estimated quantities for conservation practices to be installed in units of measure that align with those in the conservation practice. Accurate recordkeeping documents for operation and maintenance of existing and new CNMP-related practices, AFO manure imports and exports, and other information relevant to the management and compliance of the AFO with state and/or local rules and regulations are included in the CNMP. If the CNMP is not implemented all identified resource concerns will still exist.

Scenario Feature Measure: Number**Scenario Unit:** Number**Scenario Typical Size:** 1**Total Scenario Cost:** \$9,538.94**Scenario Cost/Unit:** \$9,538.94**Cost Details**

Component Name	Id	Description	Unit	Cost	Qty	Total
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Labor

Cap Labor, conservation scientist	1300	Conservation Activity Plan labor to manage, improve, and protect natural resources to maximize their use without damaging the environment. Interprets resource information and assess resource conditions to provide conservation practice alternatives to producers to make decisions on the treatment of their soil, water, air, plant, animal, and energy resources. May instruct farmers, agricultural production managers, or ranchers in best ways to use crop rotation, contour plowing, or terracing to conserve soil and water; in the number and kind of livestock and forage plants best suited to particular ranges; and in range and farm improvements, such as fencing and reservoirs for stock watering.	Hour	\$78.01	20	\$1,560.27
CAP Labor, professional engineer	1297	Conservation Activity Plan labor to apply knowledge of engineering technology and biological science to agricultural problems concerned with power and machinery, electrification, structures, soil and water conservation, and processing of agricultural products. Cost associated with this component includes overhead and benefits (market price).	Hour	\$93.87	85	\$7,978.67